APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,154	12/20/2001	Michael P. Cornaby	10559-642001/P12486	3570

20985 7590 12/03/2004	EXAMINER	
FISH & RICHARDSON, PC	KIM, KENNETH S	
12390 EL CAMINO REAL		
SAN DIEGO, CA 92130-2081	ART UNIT	PAPER NUMBER
	2111	

DATE MAILED: 12/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

> A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
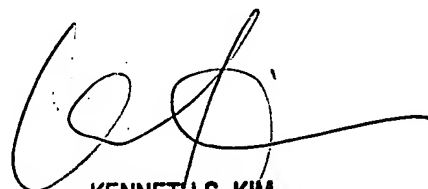> - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
> - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
> - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
> - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
> Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>28 October 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-38</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-38</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

KENNETH S. KIM
PRIMARY EXAMINER

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

1.   Claims 1-38 remain for examination.

2.   The abstract of the disclosure is objected to because the current abstract does not reflect the inventive feature of the claimed invention to distinguish over the prior art. Correction is required. See MPEP § 608.01(b).

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4.   Claims 1-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a)   Claim 1, it is not clear what is the structure of the stack and how various elements of the structure are used. (How are the structure of the stack and the use of various elements of the structure different from those of other stacks known in the art.) The phrase "our-of-order" does not provide any limitation as to the function of the stack (that distinguishes it from what is already known). An ordinary stack can be used in any manner, which can be described as "out-of-order"/

(b)   Claim 2, it is not clear what various fields signify and how they are used.

(c)   Claims 8 and 32, the same as (a).

(d)   Claim 9, the same as (b).

(e)   The use of microinstruction, microcode, and microoperations needs to be consistent or their relationships among each other needs to be recited.

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6.   Claims 1, 3, 4, 8, 10, 11, 15-22, and 26-38 are rejected under 35 U.S.C. 102(b)

as being anticipated by Gage, U.S. Patent No. 4,890,221.

Gage teaches the invention as claimed in claim 1 including a processor

comprising:

(a) an out-of-order microinstruction pointer (μIP) stack for storing pointers in a

microcode execution core (col. 4, line 67 – col. 5, line 18; microinstructions processed

during a trap window is out-of-order, and any changes made to the stack during the

processing of those microinstructions are "our-of-order" and are made before it is known

whether the sequence of the processing of the microinstructions are valid), and

further teaches as in claims 3 and 4,

(b) (μIP) field is 14 bits wide (can be any umber of bits) – claim 3,

(c) (μIP) is pushed with value from various sources and poped by micro-operations

(μOP) (col. 1, lines 32-40) – claim 4.

The method claims 8, 10, 11, 15-22, and 26-31 and the program product claims 32-38 are equivalently rejected based on the same reason. (The function of a stack, as described in the specification, is to store instruction pointers for return at the beginning of CALL instruction processing and to pop the stored pointer value at the time of RETURN instruction processing. To handle nested subroutine CALLs, top-of-stack (TOS) pointers are used to identify a location in the stack, and such pointers are reset at appropriate events.)

7.   Applicant's arguments filed October 28, 2004 have been fully considered but they are not persuasive.

Applicant argued that the stack is distinguished from that in the cited reference, because values are placed in an out-of-order stack before it is known if the sequence of operations were valid.

Examiner believes that when values are stored or how values are stored do not distinguish in how the stack operates. Furthermore, how such a limitation is enabled and identified in the stack is not recited in the claims.

Examiner notes that the newly cited reference teaches the use of a stack before it is known if a sequence of operations were valid. The operations processed during the trap shadow are out-of-order and invalid (and are identified by validity bits).

8.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth S KIM whose telephone number is (571) 272-3627. The examiner can normally be reached on M-F (8:30-17:00).

   If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on (571) 272-3632. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

   Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

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November 24, 2004

KENNETH S. KIM
PRIMARY EXAMINER